

CLAIMS

1. A process for preparing microcrystalline cellulose, characterized in that it comprises the steps of:

- 5 a) preparing a pulp by repulping,
b) pressing the pulp obtained in a),
c) decompacting the pulp obtained in b),
d) feeding the pulp obtained in c) into a pre-heated reactor,
e) cooking the pulp with the pre-heated reactor at a temperature, a time and a
10 pressure selected to obtain a pulp having a desired degree of polymerisation,
f) cooling and partially depressurising the reactor by injecting water into said reactor,
g) filtering the pulp obtained in f),
h) bleaching of the pulp obtained in g), and
15 i) drying the pulp obtained in h).

2. A process according to claim 1, characterized in that in step a) the repulping is carried out at a consistency of 2 to 3%.

20 3. A process according to claim 1 or 2, characterized in that in step e) the cooking is carried out with the addition of antioxidants.

4. A process according to any one of claims 1 to 3, characterized in that in step e) the cooking is carried out at a temperature varying from 210° to 235°C.

25 5. A process according to any one of claims 1 to 4, characterized in that in step e) the cooking time ranges between 4 and 25 minutes according to the desired degree of polymerisation.

30 6. A process according any one of claims 1 to 5, characterized in that following the cooking step e), it further comprises a purification step.

7. A process according to claim 6, characterized in that the purification step consist of filtering the pulp obtained in step e).

8. A process according to claim 6, characterized in that the purification step
5 consist of treating the pulp obtained in e) with a caustic soda solution.

9. A process according to any one of claims 1 to 8, characterized in that following cooling step f), the process further comprises a bleaching step.

10. A process according to claim 9, characterized in that the bleaching step is
10 carried out at a temperature ranging between 60° and 120°C and at an air or oxygen pressure of 120 psi.

11. A process according to claim 10, characterized in that the bleaching step is
15 carried out in the presence of peroxide, magnesium sulphate, sodium hydroxide DEQUEST* or a mixture thereof.

12. A process according to any one of claims 1. to 11, characterized in that
20 following the filtering step g), the process further comprises a homogenisation step to obtain non colloidal microcrystalline cellulose.

13. A process according to any one of claims 1 to 12, characterized in that it
further comprises a washing step prior to the filtration of step g).

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